



OW Management Report for Hurricane Harvey and Hurricane Irma – September 13, 2017 EOC Water Desk

Hurricane Harvey Update (note: Hurricane Irma report starts on page 5)

Background:

Response and recovery efforts continue throughout the Gulf Coast of TX and LA. Rivers continue to recede in the region, however major record levels will persist through this week for several areas, including Houston and Beaumont.

Federal Activities:

FEMA has activated the NRCC at Level 1 with all Emergency Support Functions (ESFs) and deployed national and several regional Incident Management Assistance Teams (IMATs). FEMA's Region 6 RRCC is also at Level 1.

State Activities:

The TX SEOC remains at full activation, while the LA SEOC remains at Level III (24 hours).

EPA HQ:

Water Desk Staffing for the coming week is as follows:

Wednesday 9/13: Jeff Fencil

Thursday 9/14: David Goldbloom-Helzner

Friday 9/15: Kevin Tingley

Saturday 9/16: Brian Pickard

Sunday 9/17: David Goldbloom-Helzner

EPA Activities: Region 6:

Recovery Activities: The Governor of Texas sent a letter to Administrator Pruitt on September 8 about the use of State Revolving Funds (SRF) to fund immediate recovery and resilience efforts for the water, wastewater and stormwater infrastructure in Texas. The National Disaster Recover Framework (NDRF) has been activated. Also, Region 6 staff have been deployed to the Joint Field Office in Austin to address recovery of water and wastewater infrastructure and other recovery support functions.

EPA Region 6 responded to a September 1, 2017 letter from the Texas Water Development Board (TWDB) requesting flexibility in the use of State Revolving Fund (SRF) resources to address immediate recovery and future resiliency efforts. TWDB and EPA's Office of Water met on September 11, 2017 regarding SRF funding to address impacts. EPA Region 6 Acting RA responded on September 12, 2017, supporting flexibilities in the SRF program and committing to expedited reviews. A follow-up meeting is scheduled at the JFO for today, September 13, 2017, with TWDB and FEMA public assistance to discuss SRF interim/bridge funding to impacted communities.



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Outreach: 20 Community Liaisons have been deployed and will be directed to strategic locations within impacted counties. The Community Liaisons will distribute information to assist citizens with common environmental and health issues they might face following a flood.

Private Domestic Drinking Water Wells Sampling Under ESF-8: EPA continues to make contact with the remaining 18 counties regarding private water well testing and our research indicates that private well testing is available across the state for a nominal fee. EPA has confirmed 21 of the 39 disaster declaration counties are currently providing private well testing for area residents. The Texas Department of State Health Services also offers bacteria testing for \$28 through the state lab. The Texas Commission on Environmental Quality (TCEQ) website provides public information and a list of NELAP Accredited Labs for well owners to analyze water samples for a fee.

Drinking Water / Wastewater Assessments

Fifteen EPA personnel are providing support to TCEQ for drinking water and wastewater system assessments in the Houston Branch.

The 3 tables below show the status of DW systems and the DW/WW assessments as of September 12, 2017.

Drinking Water and Waste Water Assessments (September 12, 2017)		
Assessment Types	Daily Assessments	Total Assessments
On-Site DW Assessments	73	518
On-Site WW Assessments	34	347
Phone DW Assessments	145	6237
Phone WW Assessments	126	4571

Drinking Water: As of 9/12/17. Both EPA and the TCEQ are contacting remaining systems to gather updated information of their status. Assistance teams are in the field working directly with system operators to expedite getting systems back to operational status.

	Number of Drinking Water Systems	Population
Fully Operational	2,109	NA
Boil Water Notices	104	NA
Shutdown	20	NA
Awaiting update	101	NA

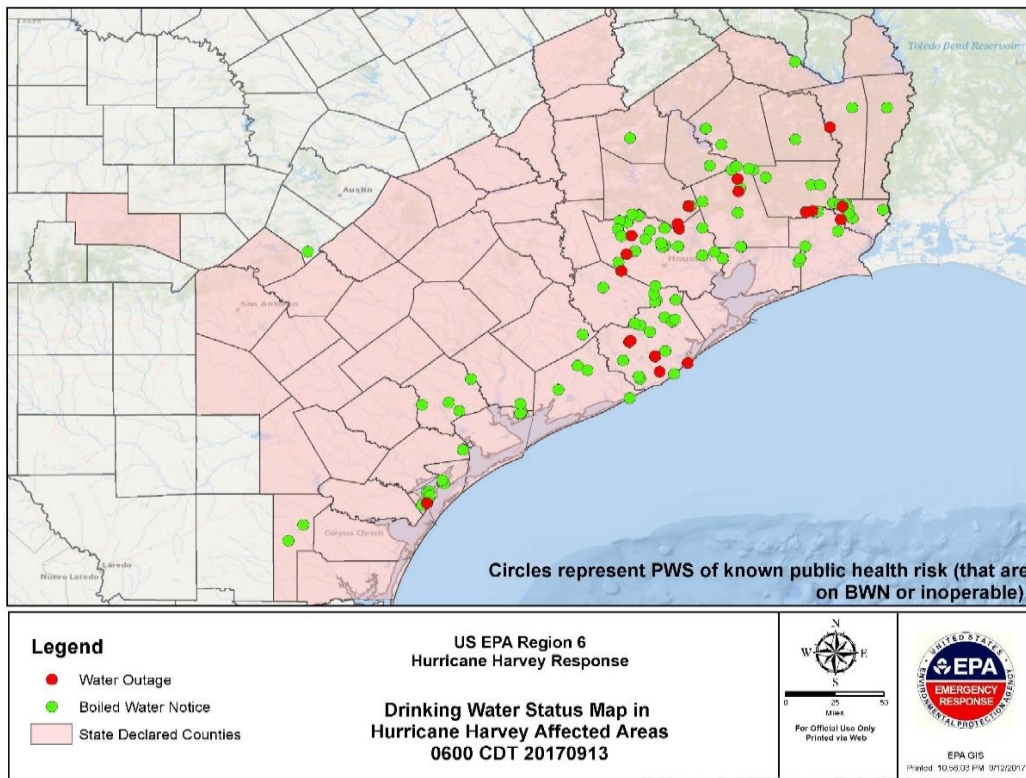


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Wastewater and Sewage: **As of 9/12/17.**

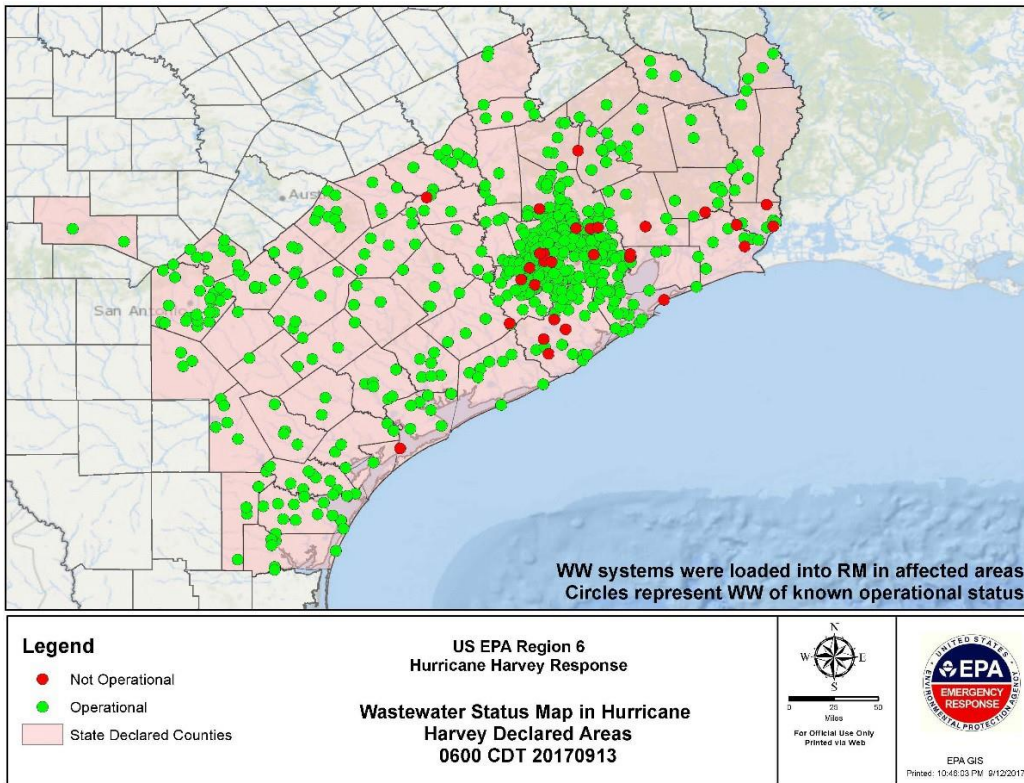
	Number of Wastewater Treatment Plants
Fully Operational	1,503
Inoperable	31
Other/unknown	91

Below are two maps that show the status of drinking water and wastewater facilities in the affected areas.





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Hurricane Irma Update

Background:

Post-Tropical Cyclone Irma continues to weaken as mainly light to moderate scattered showers continue across the Lower Mississippi Valley and into the Ohio Valley. Irma is forecast to weaken to a remnant low as it moves northwestward into the Tennessee Valley, September 12. As of 1700 ET, Irma was located approximately 65 miles NE of Tupelo, MS with maximum sustained winds of 10 (-25) mph and moving NW at 20 (+5) mph. Flood and Coastal Flood Warnings are still ongoing across portions of FL.

Local/State Activities:

Puerto Rico and U.S. Virgin Islands

The Puerto Rico (PR) Emergency Operations Center and U.S. Virgin Islands (USVI) Territorial Emergency Management Agency (EMA) are at Full Activation. The respective Governors have declared states of emergency. The PR National Guard and USVI National Guard have been activated.

Florida

Florida is currently operating at their highest level of activation - Level 1, with the State Emergency Operations Center (SEOC) staffed by Division of Emergency Management personnel and all Emergency Support Functions. The EPA Region 4 continues to staff the SEOC in Tallahassee, Florida.

Georgia

The Georgia SEOC is currently operating at a Level 1 (full activation and fully staffed) activation. A State of Emergency remains in effect for all 159 counties.

South Carolina

On September 7, 2017, an emergency declaration issued by FEMA authorized emergency protective measures (Category B), including direct federal assistance, under the Public Assistance program at 75 percent federal funding. This includes all 46 South Carolina counties and the Catawba Indian Nation.

North Carolina

The North Carolina SEOC is currently operating at Level 4 activation. They are monitoring tropical weather forecasts.

Alabama

The Alabama EMA is currently operating the SEOC at Level 3 (elevated) activation.



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Mississippi

The Mississippi SEOC is currently operating at Level 3 (modified) activation. They are monitoring Irma's path and EPA is maintaining communication with the State to determine if EPA assistance is needed.

Tennessee

The Tennessee SEOC went to a Level 4 (elevated) activation. The SEOC will remain activated with 24-hour operations.

Region 4 Federally Recognized Tribes in Potential Storm Path

Region 4 continues to coordinate with the Bureau of Indian Affairs. Tribes of concern include Seminole Tribe of Florida, Miccosukee Tribe of Indians of Florida, Catawba Indian Nation (South Carolina), Eastern Band of Cherokee Indians (North Carolina) and Poarch band of Creek Indians (Alabama).

Federal Activities:

The FEMA National Response Coordination Center (NRCC) remains at Level I (24/7 operations, Full ESFs) in response to Hurricanes Harvey and Irma. The FEMA Region II Regional Response Coordination Center (RRCC) is at Full Activation. FEMA RRCC currently has a Mission Assignment (MA) for Federal Operations Support (FOS) for \$35,000 to staff the FEMA RRCC and the Florida State EOC.

EPA Activities: Region 2:

Region 2 currently has 8 FEMA MA for pre-deployment planning, implementation, and deployment of personnel for damage assessments on St. Thomas, St. Croix and St. John in the USVI, and PR, including the islands of Vieques and Culebra.

EPA Activities: Region 4:

The EPA Region 4 Water Protection Division (WPD) received funding totaling \$75,000 under an ESF-3 MA sub-task to support the U.S. Army Corps of Engineers (USACE) drinking water and wastewater facility assessments. The WPD continues to coordinate with the Florida Department of Environmental Protection (FDEP) and the USACE relative to Water and Drinking Water issues. A Water Team will join USACE at the Florida SEOC in Tallahassee, Florida today to support preliminary water and wastewater system assessments.

Drinking Water / Wastewater Assessments:

Region 2:

Puerto Rico Drinking Water Status: As of 7:15 AM on 9/13/17, 3.03% of the population is without drinking water services. This does not include the non-Puerto Rico Aqueduct and Sewer Authority (PRASA) systems which account for



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4% of the PR population. PR remains under a boil water notice, and we are confirming the scope. PRDOH is back to functionality and is going to start the coordination of inspections to check operational status of the drinking water systems. Caribbean Environmental Protection Division (CEPD)/CWD Water Support Group in the REOC is coordinating with PRDOH, FEMA, and the USACE in order to avoid duplication of effort.

PRASA: All PRASA waste water treatment plants are in service. However, 18 of the nearly 800 sanitary pump stations are overflowing sewage due to problems caused by the hurricane. Starting today, CEPD will be conducting assessment at pump stations in the PRASA Metro and East Regions. In addition, the Culebra WWTP will be assessed on 9/14/2017.

Puerto Rico Electric Power Authority (PREPA): 87% of population with power and all PREPA waste water treatment plants are in service.

Non-PRASA Drinking Water Status: Systems that do not answer the phone will be visited by CEPD starting 9/14/17. Information has been shared with PRDOH and their staff located in the PREOC.

USVI Drinking Water Status: On 9/11/2017 Virgin Island Water and Power Authority (VIWAPA) started operating the Reverse Osmosis plant in St. Thomas for WAPA distribution. WAPA previously used desalination but has switched to RO, run by Seven Seas. Mr. Mark working to get the updated status of the entire system (distribution) etc. Boil water notice was issued for Saint Thomas and Saint John. Chlorination system is up and running.

USVI Wastewater: According to a report provided by Waste Management Authority (WMA), 6 of the 8 municipal wastewater treatment plants are in service. The only facility not in service is Vessup in Saint Thomas and the assessment of the George Simmonds WWTP has not been completed due to lack of access in the roads. In addition, WMA indicated that 4 of the 15 sanitary pump stations in Saint Thomas and Saint John are not in service. During a conversation held with VI Department of Planning and Natural Resources (DPNR) on 9/12/2017, DPNR stated that they will request assistance from EPA to conduct assessments at the TPDES facilities in Saint Thomas and Saint John. On 9/13/2017, CEPD will request the OSCs deployed in St. Thomas to assess the wastewater treatment plants and pump stations in Saint Thomas and Saint John.

Region 4:

The Water Protection Division (WPD) continues to coordinate with the FDEP and the USACE relative to Water and Drinking Water issues. The Water Team arrived in Tallahassee yesterday and will join USACE at the Florida SEOC to support preliminary water and wastewater system assessments. Water and wastewater facilities continue to submit their requests for assistance. As of September 13th, the state has requested Federal assistance via the Emergency Management Assistance Compact (EMAC) for water distribution crews to assist the Florida Key Aquaduct Authority. They have requested 10 crews with 3-4 members per team.

USEPA Region 4 Science and Ecological Support Divisions (SESD) Mobile Laboratory remains prepared to conduct the following analyses for drinking water if assistance is needed by Region 4 States. Analysis includes total coliform, E. coli,



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fecal coliform, and enterococcus. Contact has been made with the Seminole and Miccosukee Tribes in South Florida and EPA drinking water support and response capabilities were discussed.

Georgia: Initial reports from Georgia water and wastewater systems indicate that six community-water systems are without power or on back-up generators. Three Publically Owned Treatment Works (POTW) are reported as being without power or partially operating on back-up generators. Requests for back-up power generators for water and wastewater treatment facilities are coming to the State of Georgia ESF-3 desk. Approximately 10 counties are under a boil advisory.

The Miccosukee, of Florida: The Miccosukee Tribe of Florida reported that the water pumps are nonessential and the water is draining away from the structures. They remain without power or communication.

The Seminole Tribe in Florida: No environmental concerns have been noted or reported from the Seminole Tribe of Florida EOC. The tribal staff is still performing some assessments. Reported damages include: roofs, shingles, downed power lines, no electricity, and they remain under a boil water notice. Life safety checks are complete and all tribal members accounted for. All public safety facilities have sustained roof damage.

Florida: The table below provides a summary of priority facilities in Florida:

Priority Facility Sites in Florida				
Drinking Water	WWTP	NPL	RMP	FRP
1,641	386	90	263	121

Notes: **WWTP** – Wastewater Treatment Plant | **NPL** – National Priority List sites | **RMP** – Risk Management Plan facilities | **FRP** – Facility Response Plan facilities

The WPD compiled an inventory of community drinking water systems (CWS) and POTW that may be used during post storm damage assessment in Florida (see the two tables below).

**Total Number of Community Drinking Water Systems (CWS) and
Total Population Served in Florida**

State or Tribe	Number of CWS*	Population Served
Operational	417	14,385,261
Partially Operational	17	737,058
Non Operational	16	7,881
Unknown	1,191	4,865,997
Totals	1,641	19,996,197

*The State of Florida only tracks CWSs that serve a population greater than 3,300; therefore data for



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CWSs that serve less than 3,300 is not available.

** Safe Drinking Water is defined as water that satisfies all State & Federal requirements.

Operational: Facility producing safe** drinking water for greater than 90% of customers under normal operating conditions.

Partially Operational: Facility producing safe drinking water under adverse conditions and/or supplying less than 90% of customers.

Non Operational: Facility not producing or supplying safe drinking water.

Unknown: Status of facility unknown at this time.

**Total Number of Publicly Owned Treatment
Works (POTW)**

State or Tribe	NPDES Permitted Facilities		State Permits (Non- NPDES)
	POTW	Non-POTW (Industrial)	
Operational	49	27	174
Partially Operational	3	2	18
Non Operational	0	4	20
Unknown	92	209	1,809
Totals	144	242	2,021

Operational: Facility & associated collection system is properly conveying, and effectively providing wastewater treatment, in accordance with applicable permit conditions and regulations. (Operating on full or backup generator power)

Partially Operational: Facility and/or associated collection system is properly conveying and providing wastewater treatment at a compromised capacity, i.e. one or more treatment train components are non-operational, one or more lift stations are non-operational, etc.

Non Operational: Facility and/or associated collection system is not providing wastewater treatment in accordance with applicable permit conditions and regulations

Unknown: Status of facility unknown at this time